

# TREES4FUTURE

Designing Trees for the Future

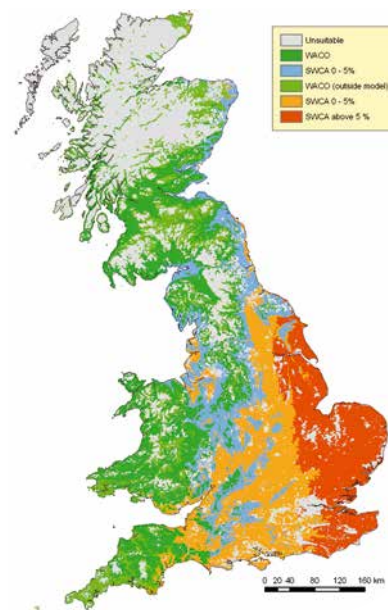
Your access to  
forest research  
resources in Europe

## TREES4FUTURE IN BRIEF

- Theme:** Research infrastructures  
for forestry research
- Duration:** 1.11.2011 – 31.10.2015
- Budget:** 9.06 million EUR
- Funder:** EU 7<sup>th</sup> Framework Programme (FP7)
- Partners:** 28 organisations from AT, BE, DE,  
ES, FI, FR, IT, NL, PL, PT, RO, SE, UK

Trees4Future is an Integrative European Research Infrastructure project that aims to integrate, develop and improve major forest genetics and forestry research infrastructures.





## Transnational Accesses

Trees4Future is a dynamic platform, offering access to research facilities that can help the European forestry and wood industries develop sustainable solutions for the future in the context of climate change.

The forest research community, and the forest-wood chain and other industries based in Europe, can gain free access to a wide range of specialized forest research infrastructures from the molecular to the forest landscape level. The 28 state-of-the-art facilities on offer across Europe focus on genetics and genomics, tree breeding, wood technology and modelling/data analysis. They include genetic databanks, biobanks, laboratories, models and decision-support systems.

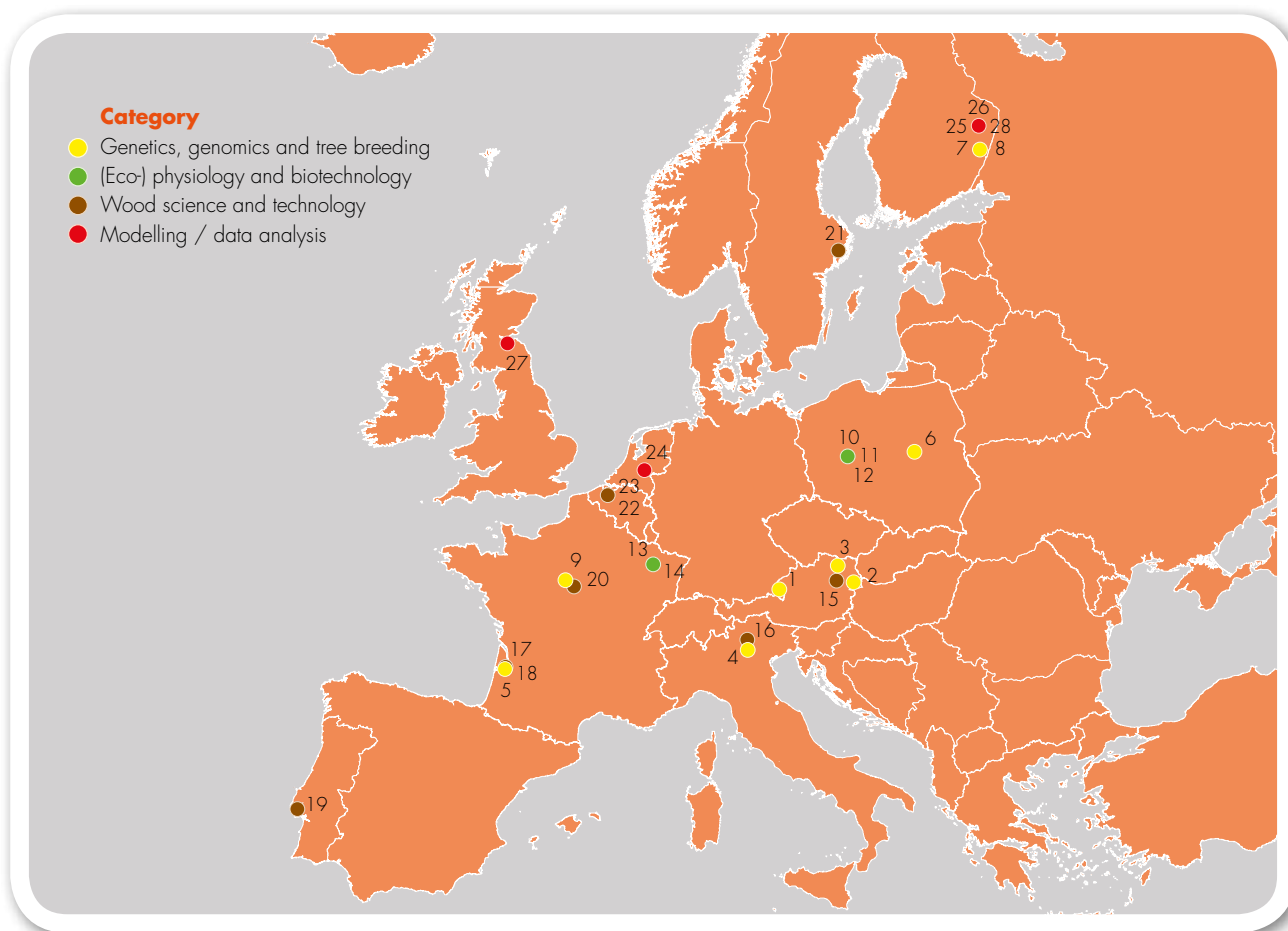
The Call for Access for Trees4Future facilities opened in June 2012, and will remain open until 2015. Successful applicants will receive a contribution of up to 450 € to their travel costs, and a daily subsistence allowance.

## Apply now!

Access is open to researchers and other experts from EU-member and associated countries. Proposals can be submitted via the Trees4Future website in a simple, two-step process.

For more information on the facilities offered, the Call for Access, and how to apply, please visit [www.trees4future.eu/transnational-accesses.html](http://www.trees4future.eu/transnational-accesses.html)





### Genetics, Genomics and Tree Breeding

- (1) ASP Traceability of Forest Reproductive Material  
Bavarian Office for Forest Seeding and Planting  
Teisendorf, Germany
- (2) BFW Department of Genetics molecular laboratory  
Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft  
Vienna, Austria
- (3) EVOLTREE Plant Gene Repository Centre and Web Portal (AIT)  
Austrian Institute of Technology GmbH  
Tulln, Austria
- (4) FEM Sequencing and Genotyping Platform  
Fondazione Edmund Mach  
San Michele all'Adige, Italy
- (5) INRA Genomics-Transcriptomics Facility (GTF)  
Institut national de la recherche agronomique  
Bordeaux, France
- (6) IBL In vitro plant breeding  
Instytut Badawczy Leśnictwa  
Sękocin Stary, Poland
- (7) METLA Cryopreservation laboratory  
Metsäntutkimuslaitos  
Punkaharju, Finland

- (8) METLA Vegetative propagation laboratory  
Metsäntutkimuslaitos  
Punkaharju, Finland
- (9) Treebreedex forest genetic databases (INRA)  
Institut national de la recherche agronomique

### (Eco-) Physiology and Biotechnology

- (10) IDPAN Ecophys CHA Lab – Carbohydrate Analysis Laboratory  
Instytut Dendrologii Polskiej Akademii Nauk  
Kórnik, Poland
- (11) IDPAN Ecophys Dendro Lab – Dendrochronology Laboratory  
Instytut Dendrologii Polskiej Akademii Nauk  
Kórnik, Poland
- (12) IDPAN Ecophys Root Lab – Root Analysis Laboratory  
Instytut Dendrologii Polskiej Akademii Nauk  
Kórnik, Poland
- (13) INRA Platform for phenotyping tree-water relations  
Institut national de la recherche agronomique  
Champenoux, France
- (14) INRA Technical Platform for Functional Ecology (PTEF)  
Institut national de la recherche agronomique  
Champenoux, France

### Wood Science and Technology

- (15) BOKU Wood quality and tree physiology platform  
Universität für Bodenkultur Wien  
Vienna, Austria
- (16) CNR-IVALSA Wood quality laboratory  
Consiglio Nazionale delle Ricerche  
San Michele all'Adige (Trento), Italy
- (17) FCBA Fungi and insects collections  
Institut Technologique Forêt Cellulose Bois-construction Ameublement  
Bordeaux, France
- (18) FCBA Physics laboratory  
Institut Technologique Forêt Cellulose Bois-construction Ameublement  
Bordeaux, France
- (19) FLOR – Forestry and Forest Products Research Unit (IICT)  
Instituto de Investigação Científica Tropical  
Lisbon, Portugal
- (20) INRA GENOBOIS Wood analysis technical platform  
Institut national de la recherche agronomique  
Orleans and Bordeaux, France
- (21) SilviScan – efficient instrument for detailed characterization of wood and fibre properties  
Inventia AB  
Stockholm, Sweden

- (22) UGent Coupled Differential Scanning Calorimetry and Thermogravimetric Analyzer (DSC-TGA)  
Universiteit Gent  
Ghent, Belgium
- (23) UGent Nanowood Multi-resolution X-ray CT scanner  
Universiteit Gent  
Ghent, Belgium

### Modelling / Data Analysis

- (24) Alt-For models (Alterra)  
Stichting Dienst Landbouwkundig Onderzoek  
Wageningen, The Netherlands
- (25) EFI Virtual Library of information services on forest resources in Europe  
European Forest Institute  
Joensuu, Finland
- (26) EFISCEN – European Forest Information SCENario model (EFI)  
European Forest Institute  
Joensuu, Finland
- (27) FR Spatial modelling of species suitability to sites and climate projections  
Forest Research  
Roslin (near Edinburgh), United Kingdom
- (28) ToSIA – Tool for Sustainability Impact Assessment (EFI)  
European Forest Institute  
Joensuu, Finland

## **Trees4Future research: better analytic, monitoring and prediction research tools for preparing forests of the future**

The project partners of Trees4Future represent a wide range of expertise from the tree/population scale to the forestry landscape scale. Trees4Future will develop new integrated facilities and research tools, in addition to providing access to their research infrastructures. The results of their joint research effort will help the European forestry sector respond in a sustainable manner to increasing demands for wood products and services (including the preservation of forest biodiversity) in the context of changing climatic conditions.

The project will develop:

- **A user-friendly analytical platform for statistical and genetic data analysis**

This will be a novel and unique platform in Europe that will enable forest researchers to have free access to a wider, better performing and integrated way of analysing their datasets, coupled with a data-mining tool.

- **A platform for molecular analysis**

The platform will collect and provide a set of genetic markers and standardised laboratory protocols for genetic identification and fingerprinting of forest resources from several species. It will support the development of a pan-European traceability system for example for forest reproductive material.

- **A GIS-based decision making tool for better matching forest tree species and varieties to environmental conditions across Europe, in particular in the context of climate change.**

This tool will also enable breeders to delineate pan-European breeding zones and deployment zones in the frame of collaborative tree improvement programmes.

- **A clearinghouse with GIS functionality**

The research data from national and EU environmental and genetic databases, plots and resources will help improve existing data sources and provide a common reference point to access the data via geo-enabled web services.

- **Integrated compatible modelling tools for prediction of forest wood resources and services**

These tools will be interconnected and enriched by integrating genetic information as well as wood quality models in order to better assess forest goods and services and their sustainability in relation to management practices and changes in environment. They will help with evaluating adaptation and mitigation strategies for European forests.

- **High-throughput phenotyping methodologies**

For some key-traits linked to tree adaptation and wood properties, improved or innovative assessment methods or tools will be developed to increase phenotyping capacity, compatible with new needs in genetic studies and genomic selection for example.

### **FOR MORE INFORMATION, CONTACT**

#### **Coordinator**

Dr. Luc E. Pâques (INRA-Orléans) • Email: [luc.paques@orleans.inra.fr](mailto:luc.paques@orleans.inra.fr)

#### **Vice-Coordinator**

Dr. Gert-Jan Nabuurs (Alterra) • Email: [gert-jan.nabuurs@wur.nl](mailto:gert-jan.nabuurs@wur.nl)

#### **Management of Transnational Access**

Dr. Franco Miglietta (Fondazione Edmund Mach) • Email: [f.miglietta@ibimet.cnr.it](mailto:f.miglietta@ibimet.cnr.it)

Paola Rosà (Fondazione Edmund Mach) • Email: [paola.rosa@fmach.it](mailto:paola.rosa@fmach.it)

#### **Project Manager**

Yohan Lecuona (INRA Transfert) • Email: [yohan.lecuona@paris.inra.fr](mailto:yohan.lecuona@paris.inra.fr)

[www.trees4future.eu](http://www.trees4future.eu)